DOI:
10.1016/j.jcpo.2018.10.003

Document Version
Peer reviewed version

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PII: S2213-5383(18)30075-4
DOI: https://doi.org/10.1016/j.jcpo.2018.10.003
Reference: JCPO 178

To appear in:

Received date: 17 September 2018
Accepted date: 31 October 2018

Please cite this article as: { https://doi.org/

Title: Cancer Control in Member Countries of Organization of Islamic Cooperation (OIC) – a status report & Istanbul Declaration by the First Ladies of OIC

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Highlights

- Cancer incidence, prevalence and mortality are increasing in OIC region, a major public health concern here and globally.
- There is a need for targeted and sustained national investment on cancer control, which will only follow promotion and prioritization of cancer control in the health & development agenda by member countries.
- Capacity building and health systems strengthening for cancer control, including prevention, screening, treatment, palliation and research is essential for preparedness and making progress on reduction of the cancer burden across the region.

Abstract

Cancer is a global public health concern with 14 million new cases and 8 million deaths per year About 52% of new cancer cases and 59% of 8.2 million deaths in the world occur in OIC (Organization of Islamic Cooperation) countries. For many years cancer were not listed among the health priorities around the globe. The increasing rates in terms of both incidence and mortality with associated healthcare and societal costs have forced countries to invest more in cancer control in different ways from prevention to treatment. In this context and following the World Cancer Leaders' Summit 2015 held in Istanbul in November the first ladies of OIC countries met in Istanbul in April 14th, 2016 upon the invitation by First lady of

Turkey, H.E. Mrs. Erdogan, during the OIC summit. The Istanbul declaration aims to draw attention to the cancer control in the OIC countries to demonstrate the high level support for cancer control programs across the region and encourage all governmental and non-governmental stake-holders to take action for further progress in cancer control from prevention to care. This article summarizes the burden of cancer within the region and presents the İstanbul Declaration by OIC Countries.

Keywords

Organization of Islamic Cooperation (OIC), inter-government organization, cancer declaration, cancer control

1. Presentation of the demographic features of Organization of Islamic Cooperation

The Organization of Islamic Cooperation (OIC) founded in 1969 is an inter-governmental organization with a membership of 57 states and 5 observer states spanning four continents (see Table 1) [1]. OIC countries cover a population of 1.65 billion which accounts for over 23% of the world's population. And this set to expand as the growth rate of OIC population between 2010 and 2015 has been 1.86%. Indonesia is the most populous country (250 million). Females have a share of 48.4% of the OIC population. Average life expectancy of the female OCI population is 69.5 years, which is 3.7 years higher than males. The age distribution is; 0-24 years 53.1%, 45-59 years 14.1%, 60+ 4.3%; reflecting the relatively young demographics of many citizens in OIC countries [2-4].

2. A summary of the current health status of the Organization of Islamic Cooperation

Health is one of the most important elements of human life. Countries and public health organizations strive to improve and maintain the highest level of population health for a better life for the people of the world. The world now better understands the economic impact of health, recognizing the contribution of healthy people to productivity and economic progress versus the burden of health care costs to the countries at different developmental level with poor health and lack of access to services that address health concerns early. Many OIC countries have recently started to pay special attention to the contribution of cancer and other non-communicable diseases to the overall health status of their populations; however; some countries and regions such as those in Sub-Saharan Africa and South Asia still need to raise their investments in health in general.

Health Expenditures/Workforce and Healthcare Financing/Facilities are detailed in Table 2. In summary, average health expenditure per capita, health /all government expenditures, density of health workers, average number of health posts, health centers, hospitals and hospital beds are fairly low compared to average number of world and developed countries [4, 5], but access to improved sanitation facilities and water sources is high at 67.6% and 84.3% respectively [4].

Non-communicable diseases (NCDs) and communicable diseases both remain major health threats for OIC countries (double burden of disease), These epidemics currently cause, respectively, 58.3% and 30.2% of all deaths in OIC countries. Cardiovascular disease is the responsible 47.1% of death of NCDs and cancer some 17% [4]. Harmful use

of alcohol, tobacco, insufficient physical activity, unhealthy diet and obesity are major common risk factors across the OIC community for the development of most NCD related morbidity and mortality [4].

While maternal and child mortality has declined within OIC region as a whole, rates are still high in Sub-Saharan Africa and South Asia. 40% of under-five mortality is due to pneumonia/sepsis (23%), diarrhea (9%) and malaria (8%) in OIC countries. Prematurity (15%), birth asphyxia (12%) and injuries (6%) are also other major causes of mortality in childhood [4].

Taking the global NCD target of availability of medicines and technologies as an indicator for the health systems response, availability of selected generic medicines for public sector health ranges between 35% and 96.7%. Indonesia is one of the major global vaccine producers with 10% share. Computed Tomography (CT) is the most available and utilized medical device among OIC countries with 144 CT examinations per million populations. Importantly, the extent and reach of the health education system and the need to improve quality is a common challenge for OIC countries [4].

3. Cancer in member countries of Organization of Islamic Cooperation

The inadequacy of health financing is another common challenge across OIC countries. The average health care spending per capita in OIC members is only US$ 147; compared to US$ 947 on average in the rest of the world [6]. The availability of survival data and survival rates for cancer are linked to the income level of the countries and the level of investment on the health care system. As an example, government spending on health care per capita directly correlates to national survival rates for pediatric cancers, with a range of 10 to 80% [7].

About 52% of the estimated 14 million new cancer cases per year now occur in OIC region [8, 9]. Women are disproportionally impacted with 53% of all incident cancer cases. Age-standardized incidence of new cancer is 127 cases per 100.000 populations in OIC countries compared to 284 for developed countries and nearly 190 for world population. Kazakhstan has the highest incidence rate (237 per 100000) for both men and women, followed by Turkey (205), Lebanon (197) and Albania (178). Niger has the lowest estimated incidence (63/100000). Breast cancer is the most prevalent cancer in OIC countries, followed by lung, cervical, colorectal and prostate cancer. According to gender, the most common cancers are lung (23.9%), prostate (17%), colorectal (12.2%), liver (10.9%) and bladder (7.3%) for men and breast (49.9%), cervical (18%), colorectal (7.3%), ovary (5%) and stomach (2.5%) for women, respectively [8] (see Figure 1). Illustrating a mix relative to human development index, with cancer driven by infections such as cervical liver and bladder cancers being represented as well as those driven by an aging population and transition to life-style driven cancers most prevalent in high income settings such as breast, lung and colorectal cancers [9, 10] (see Table 3-4).

About 59% of 8.2 million global cancer deaths take place in OIC countries compared to 28% in developed countries. The largest share (52%) of cancer deaths is in men in OIC countries, despite the slightly lower incidence in men; and this is comparable with the figures globally (57%) and developed countries (56%). Age-standardized cancer mortality is 88 deaths per 100000 populations in OIC countries compared to nearly 100-110 for developed countries and world mean. Kazakhstan has the highest incidence rate (140 deaths per 100000 populations), followed by Uganda (134), Turkey (129) and Mozambique (115). Maldives has the lowest incidence (54 deaths per 100000 populations)[8]. Lung cancer is the deadliest cancer in OIC countries, followed by stomach, breast, colorectal and cervical cancers. According to gender (for the year of

2012), the most common cancers are lung (20.6%), stomach (9.5%), colorectal (6.5%), prostate (4.7%) and esophageal (4.3%) for men and breast (14.9%), cervical (9.6%), stomach (7.0%), lung (6.8%) and colorectal (6.1%) for women, respectively [8].In contrast to the United States of America data where lung, colorectal and breast are the most common cancers, split according to gender, lung (25%), breast (14%), colorectal (8%) for women and lung (26%), prostate (9%) and colorectal (8%) for men [10].

Cancer care is delivered through coordinated work by a multidisciplinary team. Oncology professionals from all disciplines must join forces with civil society groups, patient representatives and the public health community to increase access to care and instill a systematic approach to addressing quality of care to improve individual patient outcomes and therefore, overtime national survival rates in low and middle income countries. Only with targeted action nationally, will we be able to reduce the inequities and the cancer divide at regional and global level. An effective cancer control plan is the first priority. At the time of the meeting, 27 countries reported that they had an operational policy, strategy or action plan versus 24 that did they not, and 6 did not know.

A functional population-based cancer registry, fair financing and equitable access to health care services underpin the approach to developing the plan and securing political support for its phased implementation. Health system strengthening with a focus on specific cancer types or interventions, particularly prevention was reported popular priorities in the OIC region. In addition, networks for transfer and exchange of knowledge and expertise among the decision makers, promotion of cooperation in the area of cancer control including research as well as in diagnosis and treatment were identified as opportunities for taking collective action on cancer control in OIC. [6] [8] (See Table 5).

Targeting the social determinants of health for cancer prevention through policies to reduce exposure to risk factors is essential. Tobacco use is the major cancer and NCD risk factor in OIC countries. In addition, consumption of alcohol, obesity and insufficient physical activity are controllable and preventable factors which are responsible for many of cancers, and these are a particularly growing threat across all OIC countries. Furthermore, detection and diagnosis of cancer at an early and potentially curable stage with efficient referral for treatment of detected cancers is a further lever for impact across the OIC region. Screening or early detection programs such as breast mammography, cervical cancer HPV DNA testing or visual inspection for lesion, digital exam and colonoscopy for colon cancers may help the use of more efficient surgery, shorter and less intense chemotherapy. Availability of breast screening (palpation and mammography), cervical cytology and colon cancer screening in OIC countries is 76%, 62% and 54%, respectively. Access to quality and safe radiotherapy is a marker for the extent and access to cancer treatment facilities which should also include diagnostics, surgery and treatment management and palliative care services. Availability of radiotherapy units per 100000 populations is 0.56 in OIC, 4.9 in developed countries, and 2.03 in the world. Surinam, Turkey, Lebanon, Tunisia, Malaysia have the highest density of radiotherapy units (>1.4 per 100000), but Pakistan, Senegal, Nigeria, Mali, Uganda do not (<0.1 per 100000) [8].

4. Istanbul declaration against cancer

Recognizing that all OIC countries, irrespective of their income level, must take urgent national action and make sustained investments in cancer control, the first lady of Turkey, Mrs. Erdogan, hosted a special session on First Ladies' Leadership on Cancer Control in İstanbul in April 14th, 2016. While declarations of this type are non-binding international documents, First Ladies have been shown to be excellent advocates and national roles models for mobilizing action on health issues such as child and maternal health, HIV-

AIDS and TB. While the field of non-communicable diseases has been slow to be adopted as a development issue, First Ladies are championing public awareness on cancer and other NCDs and encouraging their own populations to be proactive about reducing risk factors and engaging in early detection for cancer as well as helping to reduce stigma of cancer as a set of diseases which are still often misunderstood.

In the case of OIC, declarations have had a track record of setting standards across the region and stimulating bilateral collaborations. The special session on cancer control aimed to draw attention to the global commitments on cancer control and underscore their relevance in OIC countries. The first ladies of the OIC countries released the İstanbul declaration against cancer to show their support and commitment to raising national awareness, mobilize resources and joining forces to make progress against cancer in all OIC countries (Appendix 1).

5. Declaration highlights

Some highlights of the declaration (please refer to the appendix for the declaration in full) are;

- Urging that cancer is made a priority on health and development agenda for OIC countries and reaffirming that OIC countries are committed to taking action to avoid premature deaths due to non-communicable diseases, including cancer, diabetes, heart and lung diseases, are targeted to be reduced by one-third by 2030, as part of the commitment to the Sustainable Development Goals.
- Recognizing that the number of new cancer cases has the potential to increase by 70% over the next twenty years.

- Acknowledging that one third of cancer-induced deaths can be prevented and treated by early detection, with inaction a major threat to the social and economic development of OIC countries.
- Acknowledging that comprehensive cancer control approach is essential for effective cancer control programs and should be integrated to the implementation of the healthy lifestyles, prevention and control of contagious and non-communicable diseases, and health emergencies and disasters as a part of the resolutions adapted by the OIC Health Ministers in (See the declaration at the appendix).
- Recognizing that early detection and treatment of cancer, including palliative care is important in preventing cancer-related deaths, especially in the immediate timeframe of the 2025 and 2030 targets and should be urgently provided as humanitarian responsibility to all individuals, striving for equitable access.
- The use of human resources and appropriate technologies should be carefully planned and prioritized so that effective actions can be taken to reduce cancer burden and critically, cancer prevention, control and palliative care programs in OIC Member States and Observer States should be resourced and funded to speed implementation for national impact with urgency.

6. The way forward

Declarations are a useful mechanism to unite multiple parties behind a simple set of commitments and stimulate work collectively to achieve them. The World Cancer Declaration (WCD) launched by UICC in 2008, is visionary in nature, but has provided a framework for collective and targeted advocacy at the global level. Since the launch, a number of specific and time bound targets aligned with the WCD have been adopted by UN agencies and

Member States. The First Ladies Istanbul declaration does provide advocates across the OIC to unite behind its call to action and drive for political commitments and forge partnerships using the declaration as an umbrella for shaping their goals and objectives.

Effective cancer control plans, with associated costed and phased implementation plans must be a priority among the member countries. While action plans will differ in scope and scale across the region, the declaration calls for each Member State to prioritize these, recognizing the contribution their impact will have to national development. Priorities for potential OIC partnerships include:

- Best practice and technical assistance exchanges across the core components of NCCPs: prevention, early detection, diagnosis, treatment and palliative care
- Training to build capacities for population-based cancer registration and the role of data in coordinating and optimizing the available resources for the high-impact interventions.
- Policy and research in shaping public awareness on cancer prevention and control and in particular Statistical Economic and Social Research and Training Centre for Islamic Countries (SESRIC) led work for policy and legislation for the preparation and implementation of sustainable national tobacco control strategies in line with the guidelines set out by the WHO Framework Convention on Tobacco Control.
- National research and implementation science capacities, including research infrastructure, equipment and resources as well as skills training competence of researchers in order to conduct research in good quality.

Member States of the OIC region have an excellent opportunity to build collaborative networks and communities of practice on cancer control and health systems strengthening, bilateral twinning relationships for technical assistance and capacity building and collectively

address key research questions. A partnership with relevant national and international civil society organizations presents an opportunity to accelerate much needed implementation and scale up for national impact. Collaboration among the OIC Member States should be strengthened and strived within the framework of WHO Global Action plan, UN Sustainable Development Goals, WHO Cancer Resolution [11-13].

Conflict of interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

Funding

This publication is funded through the UK Research and Innovation GCRF RESEARCH FOR HEALTH IN CONFLICT (R4HC-MENA); developing capability, partnerships and research in the Middle and Near East (MENA) ES/P010962/1.

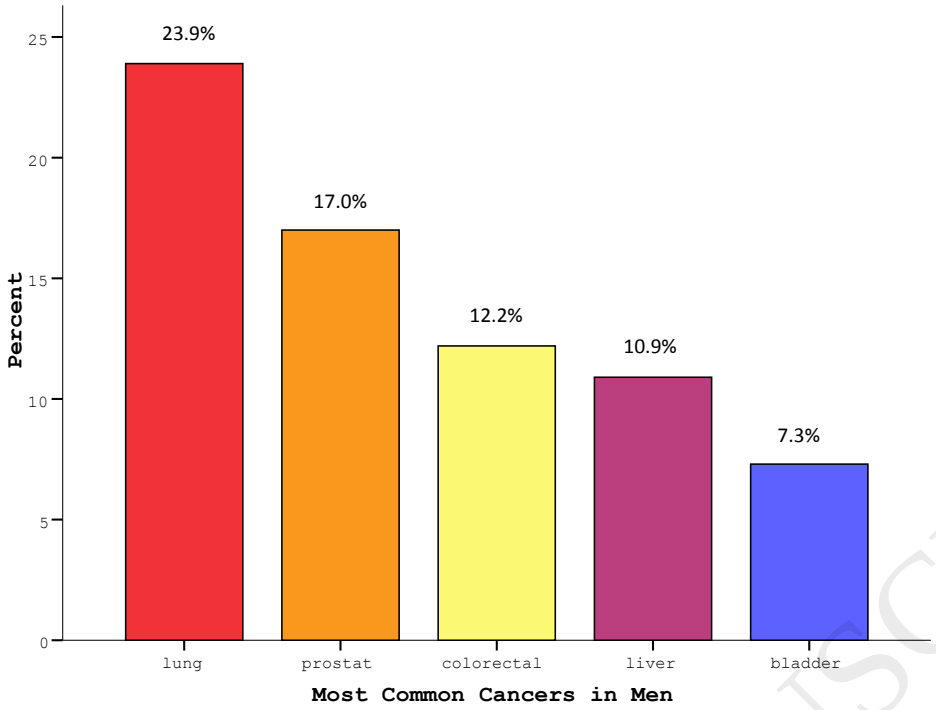
References

[1] Organisation of Islamic Cooperation, History. https://www.oic-oci.org/page/?p_id=52&p_ref=26&lan=en ; https://www.oic-oci.org/states/?lan=en, 2018 (accessed 31 July 2018).
[2] The Statistical Economic and Social Research and Training Centre for Islamic Countries (SESRIC), Demography. http://www.sesric.org/snapshot/images/5_Demography.pdf, 2014.
[3] The Statistical Economic and Social Research and Training Centre for Islamic Countries (SESRIC), Gender. http://www.sesric.org/snapshot/images/7_Gender.pdf,2016.
[4] Organisation of Islamic Cooperation-Statistical Economic and Social Research and Training Centre for Islamic Countries (SESRIC), OIC Health Report 2017. https://www.oichealth.org/belgeler/OIC_Health%20Report_EN_2017.pdf, 2017.
[5] The Organisation for Economic Co-operation and Development (OECD), Health Care Resources: Hospitals, 2018. https://stats.oecd.org/index.aspx?DataSetCode=HEALTH_STAT. (accessed 31 July 2018).
[6] The Statistical, Economic, and, Social, Research, and, Training, Centre, for, Islamic, Countries, (SESRIC), The OIC Strategic Health Programme of Action 2014-2023 (OIC-SHPA). http://www.sesric.org/files/article/480.pdf, 2014.
[7] R.C. Ribeiro, E. Steliarova-Foucher, I. Magrath, J. Lemerle, T. Eden, C. Forget, I. Mortara, I. Tabah-Fisch, J.J. Divino, T. Miklavec, S.C. Howard, F. Cavalli, Baseline status of paediatric oncology care in ten low-income or mid-income countries receiving My Child Matters support: a descriptive study, Lancet Oncol 9(8) (2008) 721-9. http://doi: 10.1016/S1470-2045(08)70194-3.
[8] Organisation of Islamic Cooperation-Statistical Economic and Social Research and Training Centre for Islamic Countries (SESRIC), Status of Cancer in OIC Member Countries. http://www.sesric.org/files/article/544.pdf, 2016.
[9] A. Jemal, P. Vineis, F. Bray, L. Torre, D. Forman, The Burden: Cancer is a leading cause of death worldwide, The Cancer Atlas, http://canceratlas.cancer.org/the-burden/human-development-index-transitions/ ,2018.
[10] R.L. Siegel, K.D. Miller, A. Jemal, Cancer statistics, 2018, CA Cancer J Clin 68(1) (2018) 7-30. http:// doi: 10.3322/caac.21442.
[11] World Health Organization, Global action plan for the prevention and control of noncommunicable diseases 2013-2020, WHO Press. http://apps.who.int/iris/bitstream/handle/10665/94384/9789241506236_eng.pdf;jsessionid=74833342AC3181282B9BF13547A8F573?sequence=1, 2013.
[12] United Nations Economic and Social Council, Progress towards the Sustainable Development Goals Report of the Secretary-General, E/2017/66. http://www.un.org/ga/search/view_doc.asp?symbol=E/2017/66&Lang=E, 2017.
[13] Seventieth World Health Assembly, Cancer prevention and control in the context of an integrated approach, WHA70.12 Agenda item 15.6. https://www.esmo.org/content/download/109686/1929997/file/2017-WHO-Cancer-Resolution.pdf, 2017.

Figure legend:

Figure 1. The most common cancers in OIC according to gender [8].

a



b

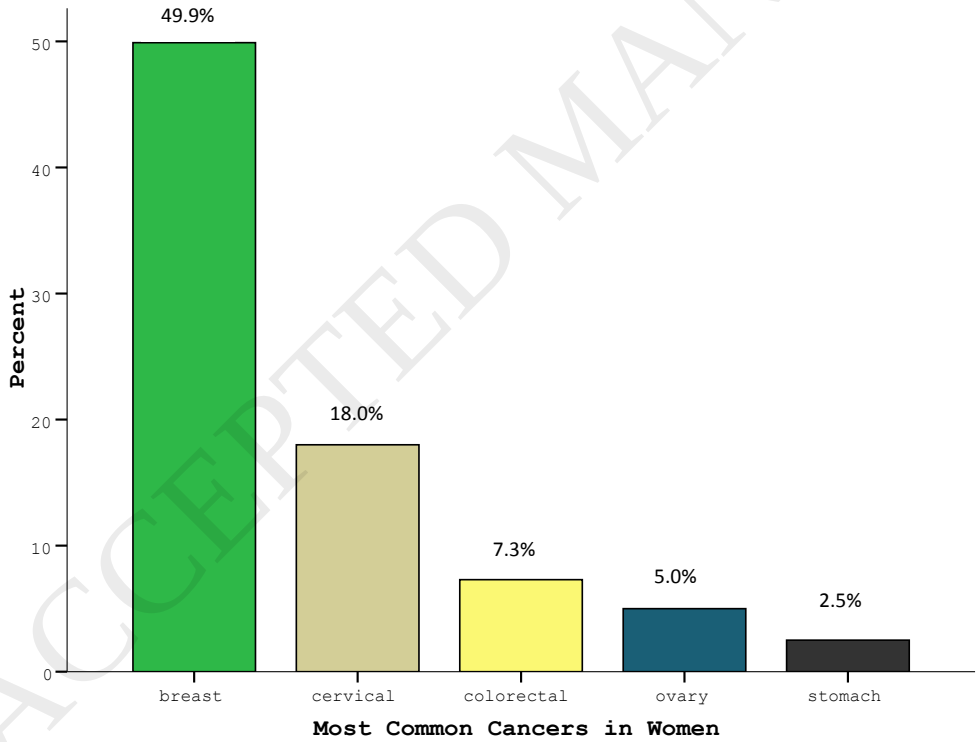


Table 1 The Member and Observer States of Organisation of Islamic Cooperation [1]

		STATE	SINCE (year)		STATE			STATE	SINCE (year)
MEMBER	1	REPUBLIC OF AZERBAIJAN	1992	20	REPUBLIC OF TOGO	1997	39	UNION OF THE COMOROS	1976
	2	HASHEMITE KINGDOM OF JORDAN	1969	21	REPUBLIC OF TUNISIA	1969	40	KYRGYZ REPUBLIC	1992
	3	ISLAMIC REPUBLIC OF AFGHANISTAN	1969	22	PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA	1969	41	STATE OF QATAR	1972
	4	REPUBLIC OF ALBANIA	1992	23	REPUBLIC OF DJIBOUTI	1978	42	REPUBLIC OF KAZAKHSTAN	1995
	5	STATE OF THE UNITED ARAB EMIRATES	1972	24	KINGDOM OF SAUDI ARABIA	1969	43	REPUBLIC OF CAMEROON	1974
	6	REPUBLIC OF INDONESIA	1969	25	REPUBLIC OF SENEGAL	1969	44	REPUBLIC OF COTE D'IVOIRE	2001
	7	REPUBLIC OF UZBEKISTAN	1996	26	REPUBLIC OF THE SUDAN	1969	45	STATE OF KUWAIT	1969
	8	REPUBLIC OF UGANDA	1974	27	SYRIAN ARAB REPUBLIC	1972	46	REPUBLIC OF LEBANON	1969
	9	ISLAMIC REPUBLIC OF IRAN	1969	28	REPUBLIC OF SURINAME	1996	47	LIBYA	1969
	10	ISLAMIC REPUBLIC OF PAKISTAN	1969	29	REPUBLIC OF SIERRA LEONE	1972	48	REPUBLIC OF MALDIVES	1976
	11	KINGDOM OF BAHRAIN	1972	30	REPUBLIC OF SOMALIA	1969	49	REPUBLIC OF MALI	1969
	12	BRUNEI-DARUSSALAM	1984	31	REPUBLIC OF IRAQ	1975	50	MALAYSIA	1969
	13	PEOPLE'S REPUBLIC OF BANGLADESH	1974	32	SULTANATE OF OMAN	1972	51	ARAB REPUBLIC OF EGYPT	1969
	14	REPUBLIC OF BENIN	1983	33	REPUBLIC OF GABON	1974	52	KINGDOM OF MOROCCO	1969
	15	BURKINA-FASO	1974	34	REPUBLIC OF THE GAMBIA	1974	53	ISLAMIC REPUBLIC OF MAURITANIA	1969
	16	REPUBLIC OF TAJIKISTAN	1992	35	REPUBLIC OF GUYANA	1998	54	REPUBLIC OF MOZAMBIQUE	1994
	17	REPUBLIC OF TURKEY	1969	36	REPUBLIC OF GUINEA	1969	55	REPUBLIC OF NIGER	1969
	18	TURKMENISTAN	1992	37	REPUBLIC OF GUINEA-BISSAU	1974	56	FEDERAL REPUBLIC OF NIGERIA	1986
	19	REPUBLIC OF CHAD	1969	38	STATE OF PALESTINE	1969	57	REPUBLIC OF YEMEN	1969
OBSERVER	1	BOSNIA AND HERZEGOVINA	1994						
	2	CENTRAL AFRICAN REPUBLIC	1996						
	3	KINGDOM OF THAILAND	1998						
	4	THE RUSSIAN FEDERATION	2005						
	5	TURKISH CYPRIOT STATE	1979						

Table 2 Health Expenditures/Workforce and Healthcare Financing/Facilities in OIC Countries Compared with World and Developed Countries [4, 5]

	OIC	World	Developed
Average health expenditure per capita (US$) (2014)	202	1114	5899
Health /all government expenditures (%)	8.4	15.4	18.4
Density of health workers (per 10,000 population)	26	48	125
Average number of Health posts (per 100,000 population)	6.7	14.8	N/A
Average number of health centers (per 100,000 population)	2.1	2.4	N/A
Average number of hospitals (per 100,000 population)	0.9	1.3	1.7*,2.9**,3.8***
Average number of hospital beds (per 100,000 population)	9.5	24.5	66.6

*United States; **United Kingdom; ***Germany; N/A, not available

Table 3 Cancer Figures of Organization of Islamic Cooperation (8)

Global estimated new cancer cases per year	About 52% of 14 million
Gender of cancer cases	Women (53%)
Age-standardized incidence of new cancer	127 cases per 100.000
Highest cancer incidence rate	Kazakhstan (237 per 100000)
Lowest cancer incidence rate	Niger (63/100000).
Most prevalent cancer in OIC countries	Breast, lung, cervical, colorectal, prostate
Most common cancers for men	Lung, prostate, colorectal, liver, bladder
Most common cancers for women	Breast, cervical, colorectal, ovary,stomach

Table 4. Incidence of Cancer 2012 in OIC countries [8]

Country	New Cancer Cases			Age-Standardized Incidence Rate		
	Men	**Women**	**Both**	**Men**	**Women**	**Both**
Afghanistan	9511	10467	19978	112.4	119.5	115.2
Albania	3639	3504	7143	185	173.2	178.3
Algeria	16385	21523	37908	116.2	132.7	123.5
Azerbaijan	7154	6762	13916	165.8	124	141.9
Bahrain	463	435	898	112.8	121.9	112.4
Bangladesh	60696	62019	122715	109.4	100	104.4
Benin	2057	3043	5100	87.2	102.7	94.3
Brunei	231	290	521	149.5	179	163.2
Burkina Faso	2748	5012	7760	75.9	99.8	88.2
Cameroon	5450	8331	13781	81.2	114.1	97.6
Chad	2432	3646	6078	77.4	99.2	88.1
Comoros	165	297	462	81.9	121.8	101.5
Cote d Ivoire	5430	6572	12002	78.2	101	89
Djibouti	210	371	581	73.7	111.3	92.7
Egypt	52958	55653	108611	158.4	147.8	152
Gabon	438	602	1040	79.9	101.5	90.2
Gambia	292	265	557	67.3	69.6	68.2
Guinea	2337	2969	5306	88.9	94	90
Guinea-Bissau	311	503	814	70	96	83.1
Guyana	377	640	1017	144.4	193.5	165.9
Indonesia	138840	160833	299673	136.2	134.4	133.5
Iran	44838	39991	84829	134.7	120.1	127.7
Iraq	11489	14177	25666	144.6	131.7	135.3
Jordan	3115	3268	6383	153.3	157.8	155.4
Kazakhstan	18744	21675	40419	282.2	216.7	236.5
Kuwait	870	819	1689	89.8	123.3	102.1
Kyrgyzstan	2680	3123	5803	151.6	129.4	137.6
Lebanon	4321	4738	9059	203.9	192.8	197.4
Libya	3130	2947	6077	135.9	113.1	124.1
Malaysia	18125	19301	37426	144.9	143.4	143.6
Maldives	114	109	223	91.6	84.8	88.9
Mali	3119	6235	9354	83.8	135.6	111.4
Mauritania	690	1153	1843	74.4	97.7	85.7
Morocco	16829	18189	35018	122.7	114.4	117.8
Mozambique	8569	13445	22014	118.3	153	136.8
Niger	2499	3402	5901	56.7	71	63.4
Nigeria	37370	64709	102079	79	121.7	100.1
Oman	807	677	1484	78.6	92.4	82.1
Pakistan	63451	84590	148041	96	127.7	111.8
Palestine	1669	1795	3464	150.5	142.7	145.7
Qatar	640	377	1017	104	134.5	108.8
Saudi Arabia	8296	9226	17522	85.9	102.8	91.1
Senegal	2458	4318	6776	85.5	115	101.2
Sierra Leone	1082	1715	2797	83.8	97.7	92.3
Somalia	2807	4882	7689	111.9	165.2	139.1
Sudan	9554	10801	20355	92	91	91.1
Suriname	392	451	843	163.8	162.7	159.6
Syria	10405	11386	21791	148.3	145.2	145.9
Tajikistan	2629	2904	5533	128.7	112.3	119.1
Togo	1418	2255	3673	77.2	104.8	91.1
Tunisia	6745	5444	12189	127	95.7	110.6
Turkey	85821	62143	147964	257.8	161.6	205.1
Turkmenistan	2920	3075	5995	159.4	132.8	144
Uganda	14052	15328	29380	175.7	167.4	169.7
United Arab Emirates	1489	1446	2935	83.8	127.1	92.5
Uzbekistan	9836	12793	22629	96.9	103.5	99.7
Yemen	5270	6084	11354	81.2	80.7	80.4

GLOBOCAN 2012, International Agency for Research on Cancer (IARC)

Table 5. Initiatives Promoting Community Awareness and Participation in Preventing, Combatting and Controlling of Cancer in OIC countries [6, 8]

Initiative	Subheading	Avail		
		Yes	No	
Cancer Plans, Monitoring and Surveillance	Existence of National, Population-Based Cancer Registry	10	43	
	Existence of Operational Policy/Strategy/Action Plan	27	24	
Status of Prevention Policies	Existence Operational Action Plan to Reduce the Harmful Use	17	33	
	Existence of Action Plan to Decrease Tobacco Use	30	21	
	Ban on Appearance of Tobacco Brands in TV and/or Films	33	23	
	Treatment for Tobacco Dependence Available in Health Clinics/Primary Care Facilities	28	28	
	Existence of Operational Action Plan to Reduce Physical Inactivity	23	28	
Early Detection and Treatment	Breast Cancer Screening (by palpation or mammogram)	39	15	
	Cervical cytology	32	22	
	Colon cancer screening	26	28	
	Radiotherapy units	37	19	

Source:WHO